

Appl. No. 09/685,200  
Amendment dated November 26, 2004  
Reply to Office Action of September 27, 2004

**IN THE SPECIFICATION:**

Please replace the paragraph running from page 1, line 5, to page 3, line 21, of the specification with the following:

The present document contains subject matter related to that disclosed in the following commonly owned, and co-pending U.S. Patent Applications: Serial No. 09/209,460 filed December 11, 1998, entitled ULTRA WIDE BANDWIDTH SPREAD-SPECTRUM COMMUNICATIONS SYSTEM (Attorney Docket No. 10188-0001-8), now issued as United States Patent No. 6,700,939; Serial No. 09/633,815 filed August 7, 2000 entitled ELECTRICALLY SMALL PLANAR UWB ANTENNA (Attorney Docket 10188-0005-8); Serial No. 09/563,292 filed May 3, 2000 entitled PLANAR UWB ANTENNA WITH INTEGRATED TRANSMITTER AND RECEIVER CIRCUITS (Attorney Docket 10188-0006-8), now issued as United States Patent No. 6,351,246; Serial No. 60/207,225 filed May 26, 2000 entitled ULTRA WIDE BANDWIDTH SPREAD SPECTRUM COMMUNICATIONS SYSTEM (Attorney Docket 10188-0006-8); Serial No. 09/685,198 filed October 10, 2000 entitled ANALOG SIGNAL SEPARATOR FOR UWB VERSUS NARROWBAND SIGNALS (Attorney Docket 192504US8); Serial No. 60/238,466 filed October 10, 2000, entitled ULTRA WIDE BANDWIDTH NOISE CANCELLATION MECHANISM AND METHOD (Attorney Docket 193517US8); Serial No. 60/217,099 filed July 10, 2000, entitled MULTIMEDIA WIRELESS PERSONAL AREA SYSTEM NETWORK (WPAN) PHYSICAL LAYER SYSTEM AND METHOD Attorney Docket 194308US8PROV); Serial No. 09/685,203 filed October 10, 2000, entitled SYSTEM AND METHOD FOR BASEBAND REMOVAL OF NARROWBAND INTERFERENCE IN ULTRA WIDEBAND SIGNALS (Attorney Docket 194381US8); Serial No. 09/685,197 filed October 10, 2000, entitled MODE CONTROLLER

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FOR SIGNAL ACQUISITION AND TRACKING IN AN ULTRA WIDEBAND COMMUNICATION SYSTEM (Attorney Docket 194588US8); Serial No. 09/685,197 filed October 10, 2000, entitled ULTRA WIDEBAND COMMUNICATION SYSTEM WITH LOW NOISE PULSE FORMATION (Attorney Docket 195268US8); Serial No. 09/685,195 filed October 10, 2000, entitled ULTRA WIDE BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION (Attorney Docket 195269US8); Serial No. 09/684,401 filed October 10, 2000, entitled ULTRA WIDE BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION USING SUB CODE SPINS (Attorney Docket 195272US8); Serial No. 09/685,196 filed October 10, 2000, entitled ULTRA WIDE BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION USING MULTIPLE DETECTION ARMS (Attorney Docket 195273US8); Serial No. 09/685,202 filed October 10, 2000, entitled METHOD AND SYSTEM FOR ENABLING DEVICE FUNCTIONS BASED ON DISTANCE FORMANCE (Attorney Docket 195671US8); Serial No. 09/685,201 filed October 10, 2000, entitled CARRIERLESS ULTRA WIDEBAND WIRELESS SIGNALS FOR CONVEYING APPLICATION DATA (Attorney Docket 196108US8), now issued as United States Patent No. 6,505,032; Serial No. 09/685,205 filed October 10, 2000, entitled SYSTEM AND METHOD FOR GENERATING ULTRA WIDEBAND PULSES (Attorney Docket 197023US8); Serial No. 09/684,782 filed October 10, 2000, entitled ULTRA WIDEBAND COMMUNICATION SYSTEM, METHOD, AND DEVICE WITH LOW NOISE RECEPTION (Attorney Docket 197024US8); and Serial No. 09/685,199 filed October 10, 2000, entitled A LOW POWER, HIGH RESOLUTION TIMING GENERATOR FOR ULTRA-WIDE BANDWIDTH COMMUNICATIONS SYSTEMS (Attorney Docket 195670US8), the entire contents of each of which being incorporated herein by reference.

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Please replace the paragraph on page 13, lines 11-21, of the specification with the following:

Figure 6 shows a receiver correlator 30 of the present invention which receives from transmitter 32 an ultra wide bandwidth signal RF. Ultra wide bandwidth signal RF comprises a sequence of wavelets of particular shapes and positions. Transmitter 32 is disclosed in Serial No. ~~XXX/XXX,XXX~~ 09/685,205, filed October 10, 2000, entitled SYSTEM AND METHOD FOR GENERATING ULTRA WIDEBAND PULSES (Attorney Docket 197023US8), incorporated herein by reference, and in Serial No. ~~XX/XXX,XXX~~ 09/685,197, filed October 10, 2000, entitled ULTRA WIDEBAND COMMUNICATION SYSTEM WITH LOW NOISE PULSE FORMATION (Attorney Docket 195268US8), incorporated herein by reference.

Please replace the paragraph on page 14, lines 1-12, of the specification with the following:

In addition, the receiver correlator structure 30 of the present invention receives an ultra wide bandwidth signal LO. Ultra wide bandwidth signal LO comprises a sequence of wavelets of particular shapes and positions corresponding to ultra wide bandwidth signal RF. Ultra wide bandwidth signal LO is produced by timing generator 36 as disclosed in co-pending Application Serial No. ~~XX/XXX,XXX~~ 09/685,199, filed October 10, 2000, entitled A LOW POWER, HIGH RESOLUTION TIMING GENERATOR FOR ULTRA-WIDE BANDWIDTH COMMUNICATIONS SYSTEMS (Attorney Docket 195670US8), incorporated herein by reference. More particularly, timing generator 36, based upon inputs of frequency, phase, and time dither, prompts wavelet generator 34 to generate LO, which is time-aligned with signal RF.

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Please replace the paragraph on page 14, lines 13-16, of the specification with the following:

Wavelet generator 34 is disclosed in co-pending Application Serial No. ~~XXXXXX,XXX~~ 09/685,205, filed October 10, 2000, entitled SYSTEM AND METHOD FOR GENERATING ULTRA WIDEBAND PULSES (Attorney Docket 197023US8), incorporated herein by reference.

Please replace the paragraph on page 15, lines 11-18, of the specification with the following:

Figure 9A shows a more detailed diagram of receiver correlator structure 30 of the present invention. As shown in Figure 9A, signal RF impinges upon antenna 38, and is coupled to mixer 40. Antenna 38 could be a conventional antenna or could be of the structure disclosed in co-pending U.S. Patent Application Serial No. 09/563,292 filed May 3, 2000 entitled PLANAR UWB ANTENNA WITH INTEGRATED TRANSMITTER AND RECEIVER CIRCUITS (Attorney Docket 10188-0006-8), now issued as United States Patent No. 6,351,246, incorporated herein by reference.

Please replace the paragraph running from page 15, line 19, through page 16, line 7, of the specification with the following:

Mixer 40 receives signal RF and local oscillator signal LO, which is time-aligned with signal RF as discussed in co-pending U.S. Application Serial No. ~~XXXXXX,XXX~~ 09/685,197, filed October 10, 2000, entitled MODE CONTROLLER FOR SIGNAL ACQUISITION AND TRACKING IN AN ULTRA WIDEBAND COMMUNICATION SYSTEM (Attorney Docket

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194588US8), incorporated herein by reference, and in Serial No. ~~XX/XXX,XXX~~ 09/685,195, filed October 10, 2000, entitled ULTRA WIDE BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION (Attorney Docket 195269US8), incorporated herein by reference.

Please replace the paragraph running from page 17, line 15, through page 18, line 5, of the specification with the following:

In one embodiment, integrator 98 would function as a D-latch circuit, in which the integrator would sample a signal input thereto on the rising edge of a clock pulse input to the the integrator 98, and transfers to the output of integrator 98 the signals that were integrated since the prior clock pulse. Such an integrator 98 would comprise a ping-pong circuit, which would comprise two integrators functioning during alternating clock periods. An example of such an integrator 98 is disclosed in U.S. Patent Application Serial No. 09/209,460 filed December 11, 1998, entitled ULTRA WIDE BANDWIDTH SPREAD-SPECTRUM COMMUNICATIONS SYSTEM (Attorney Docket No. 10188-0001-8), now issued as United States Patent No. 6,700,939, incorporated herein by reference, and in U.S. Patent Application Serial No. 09/633,815 filed August 7, 2000 entitled ELECTRICALLY SMALL PLANAR UWB ANTENNA (Attorney Docket 10188-0005-8), incorporated herein by reference.

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Please replace the paragraph on page 23, lines 7-11, of the specification with the following:

The Transceiver 100 is described in further detail in U.S. Application Serial No. ~~XXXXXX,XXX~~ 09/685,199, filed October 10, 2000, entitled A LOW POWER, HIGH RESOLUTION TIMING GENERATOR FOR ULTRA-WIDE BANDWIDTH COMMUNICATIONS SYSTEMS (Attorney Docket 195670US8), incorporated herein by reference.

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### COMMENTS AND RESPONSE

In view of the comments below, Applicants respectfully requests that the Examiner reconsider the present application including rejected claims, as amended, and withdraw the claim rejections.

#### *Drawings*

The Examiner required new corrected drawings be filed in this application because informal drawings had previously been filed.

The Examiner has objected to the drawings under 37 C.F.R. 1.84(n) and 1.84(o) for failing to label certain blocks. In particular the Examiner notes that there is no label for blocks 30-36 in Figure 6, block 94 in Figure 9D, block 99 in Figure 9E, block 34 in Figure 16, and blocks 44 and 46 in Figure 17. The Examiner has requested that these blocks be provided with descriptive labels.

By this response, Applicants submit proposed drawing corrections for Figures 6, 9D, 9E, 16, and 17 providing descriptive labels as requested. In particular, element 30 is labeled as a receiver correlator; element 32 is labeled as a transmitter; element 34 is labeled as a wavelet generator; element 36 is labeled as a timing generator; element 44 is labeled as a converter; element 46 is labeled as a DSP; element 94 is labeled as a comparator; and element 99 is labeled as an ADC.

Applicants respectfully request that the Draftsperson approve these amended drawings. Upon approval of these amended drawings, Applicants will submit formal copies of these drawing sheets.

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Based on the proposed drawing corrections provided with this response, Applicants submit that they have fully responded to the Examiner's objection to the drawings and ask that the objection be withdrawn.

### ***Specification***

The Examiner objected to the specification based on a number of informalities. In particular, the Examiner required the status of cited applications be updated.

By this response Applicants have made the appropriate amendments to fill in all known serial numbers and issued patent numbers.

For at least the reasons given above, applicants submit that all of the informalities noted by the Examiner have been corrected. Applicants therefore respectfully request that the Examiner withdraw the objection to the specification.

### ***Allowable Subject Matter***

The Examiner has indicated that claims 1-26 are allowable. Applicants acknowledge the allowability of these claims.

### ***Information Disclosure Statements***

Along with the Office Action dated May 19, 2004, the Examiner returned a number of initialed lists of submitted documents. However, in the list dated April 5, 2004, the Examiner did not initial document AD, PCT Application No. WO 01/93441 A1.

Applicants respect request that the Examiner provide them with a copy of this page with this document initialed to indicate that the Examiner has considered it.



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In addition, Applicants also submitted an Information Disclosure Statement on May 27, 2004, citing a number of co-pending patent documents. Applicants also respectfully request that the Examiner provide copies of the citation forms properly initialed to indicate that these documents were considered by the Examiner.

*Conclusion*

If the Examiner has any suggestions, comments, or questions, calls are welcome at the telephone number below.

Although it is not anticipated that any additional fees are due or payable, the Commissioner is hereby authorized to charge any fees that may be required to Deposit Account No. 50-1147.

Respectfully Submitted,



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